

FEB 09 2006

Dr. Thomas Rosenbaum
Vice President for Research and
Argonne National Laboratory
The University of Chicago
5801 South Ellis Avenue
Chicago, Illinois 60636

Dear Dr. Rosenbaum:

SUBJECT: U.S. DEPARTMENT OF ENERGY (DOE) FISCAL YEAR (FY) 2005 FINAL
ANNUAL EVALUATION REPORT OF THE UNIVERSITY OF CHICAGO FOR THE
MANAGEMENT AND OPERATION OF ARGONNE NATIONAL LABORATORY

In accordance with the Performance-Based Prime Contract with DOE, the University of Chicago is responsible for the management and operation of Argonne National Laboratory (ANL). This Prime Contract requires DOE to establish formal expectations and to perform an annual performance evaluation of the University of Chicago for that contract work.

Consistent with the enclosed Final Annual Evaluation Report for the period October 1, 2004 through September 30, 2005 (Enclosure), the University of Chicago received the following ratings for the ANL Performance Measures:

<u>Performance Measures</u>	<u>Rating</u>
Science and Technology	Outstanding
Contractor Management	Outstanding
Integrated Safety Management	Good
Infrastructure Management	Outstanding
Business Management	Outstanding

With one notable exception, the University of Chicago continues to consistently receive very high ratings from the Office of Science (SC) for their role in managing and operating Argonne National Laboratory. Both the ANL Management and the University of Chicago demonstrate strong leadership of the Laboratory. Noteworthy accomplishments during FY 2005 include: the smooth transition of ANL-West to the Idaho National Laboratory; the receipt of four R&D 100 Awards (the highest for an SC Laboratory); the Advanced Photon Source continues to achieve very high X-ray availability; the Intense Pulsed Neutron Source run cycles continue to maintain very high reliability; notable progress on the construction of the Center for Nanoscale Materials Project continues; and ANL was selected by the National Association of the Business Resources as one of the forty best companies to work for in the Chicago area and received a separate award for having the "best practices" of any company in the area of "Diversity and Multi-Culturalism". In addition, ANL continues to maintain a very positive working relationship with the local surrounding communities.

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The FY-05 Office of Science Program Performance Evaluation signed by James F. Decker, Principle Deputy Director, is included in Attachment B of the enclosed report.

While the overall ANL performance for FY 2005 is highly rated, DOE assessments of individual performance areas uncovered weaknesses in the ANL Integrated Safety Management Program, particularly in the management of ANL nuclear facilities.

In light of the significant weaknesses that were identified in the ANL Integrated Safety Management Program, please submit for my approval the Laboratory's FY 2005 Annual Bonus (Non-Base Lump Sum Payments) Plan prior to disbursement. It is my expectation that the performance issues, noted above and in the enclosed report, will be appropriately reflected in the bonus allocation(s).

Based on the DOE ratings identified above, the University of Chicago is authorized to draw fee for the FY 2005 Performance Period in the amount of \$3,158,750.00.

If you have any questions, please contact me or Sergio Martinez, of my staff, at (630) 252-2075.

Sincerely,

Original Signed by
Robert C. Wunderlich

Robert C. Wunderlich
Contracting Officer
Site Manager

Enclosures:
As Stated

cc: R. Carder, UC, w/encls.
A. Cohen, ANL/COO, w/encls.
D. Joyce, ANL/OTD, w/encls.
R. Rosner, ANL/OTD, w/encls.
D. Schmitt, ANL/OPS, w/encls.

bc: R. Wunderlich, ASO, w/encls.
C. Zook, ASO, w/encls.
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S. Martinez, ASO, w/encls.

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CONCUR

ASO/dt

Wunderlich

2/03/06

Final
Annual Evaluation Report
of the University of Chicago (UofC) for the
Management and Operation of
Argonne National Laboratory (ANL)
for the Period
October 1, 2004 through September 30, 2005
(Fiscal Year 2005)

Prepared by: Robert C. Wunderlich
Manager, Argonne Site Office
Date: January 13, 2006

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I. Executive Summary Evaluation:

Summary:

For FY-05, University of Chicago received the following ratings from the Department of Energy Office of Science for the management and operation of ANL. The Business Management rating is a composite of the System Assessment Measures.

Science and Technology	Outstanding
Contractor Management	Outstanding
Integrated Safety Management	Good
Infrastructure Management	Outstanding
Business Management	Outstanding

With one notable exception, the University of Chicago continues to consistently receive very high ratings from the Office of Science for their role in managing and operating Argonne National Laboratory. An "Outstanding" is the highest rating in a five tier rating system. An "Excellent" rating is the second highest rating and a "Good" rating is the middle rating in the 5-tier rating system. An "Outstanding" rating means that the University of Chicago significantly exceeds the standard of performance and achieves noteworthy results. An "Excellent" rating means that ANL exceeds the standard of performance, although there may be room for improvement in some elements; better performance in all other elements more than offset this. A "Good" rating means that ANL meets the standard of performance, while deficiencies do not substantially affect performance.

Accomplishments:

There were a number of significant achievements made by the University of Chicago/ANL during FY 2005 including the following accomplishments:

- 1) The transition of ANL-W to the Idaho National Laboratory went extremely well. This required considerable planning and attention by ANL management as well as flexibility in responding to requests from DOE.
- 2) APS operations continue to achieve very high X-ray availability. For FY-05, the APS increased the X-ray availability (98.6%) for user beam while also increasing the number of unique experimenter.
- 3) IPNS run cycles continue to maintain very high reliability in FY 2005.
- 4) Notable progress on the construction of the Center for Nano-Scale Materials Project continues with the full expectation that it will be completed within cost (\$72M) and schedule (building in 4/06 and equipment in 9/07).
- 5) ANL's participation as a partner in the Linac Coherent Light Source Project at SLAC is going very well.
- 6) ANL was awarded four R&D 100 Awards for FY-05. No other DOE Laboratory won more awards than ANL. These awards included the following: Multilayer Lens Wafers for X-Ray Lenses; MPICH2 Release 1.0 High Performance, Portable Implementation of the Message Passing Interface Standard for Parallel Computing, Self-Contained Battery-Powered bion7 Microstimulator with Rechargeable Miniature Battery; High-Temperature Potentiometer Oxygen Sensor with Internal Reference.

- 7) ANL has continued to maintain a very positive working relationship with the local communities surrounding the ANL site.
- 8) ANL obtained continuing financial support from the State of Illinois for the Center for Nanoscale Materials and a commitment for guaranteeing bonds for the proposal for a Third Party Financed Building at ANL.
- 9) ANL was selected by the National Association of Business Resources as one of the forty best companies to work for in the Chicago area and ANL received a separate award for having the "best practices" of any company in the area of "Diversity and Multi-Culturalism."

ANL has effective business processes in place that include financial management, procurement, personal property, human resources, information management, project management, and technology and intellectual property management. Both ANL and the University of Chicago continue to maintain an active and effective working relationship with DOE.

Performance Issues:

The FY-05 DOE assessment uncovered weaknesses in the ANL Integrated Safety Management Program, particularly the management of the ANL nuclear facilities. ASO has also identified some improvements that are needed in the Safeguards and Security Materials Control and Accountability area.

Opportunities for Improvement:

While the overall ANL performance rating is highly rated, assessments of individual performance areas uncovered some specific opportunities for improvement that provide a focus for FY-06 continuous improvement efforts. In addition, during times of significant change, such as the Congressional mandated contract competitions at the DOE Office of Science Laboratories, the University of Chicago needs to maintain a focus on the operation and resolution of day-to-day issues at ANL.

Fee:

Based on the FY-05 DOE ratings, the University of Chicago earned \$3,158,750 of a total possible \$3,500,000 of the management and operation of Argonne National Laboratory (over 90% of available fee).

This fee represents 0.6% of the total ANL FY-05 Budget (approximately \$500M).

II. Main Body of the Report

1.0 Introduction:

In accordance with the performance-based contract with DOE, the University of Chicago is responsible for the management and operation of Argonne National Laboratory (ANL). This contract requires DOE to establish formal expectations at the beginning of each fiscal year and to perform an annual performance evaluation of the University of Chicago at the end of the year against the formal expectations. The payment of fee to the University of Chicago is contingent on the results of the annual DOE performance evaluation. Since the inception of the ANL performance-based contract in 1995, the University of Chicago performance has been rated very highly by the sponsoring DOE Program Offices and by the Argonne Site Office (ASO).

For FY-05, the overarching performance expectations assigned to the ANL Contract were:

Science and Technology: ANL will deliver innovative, forefront science and technology consistent with the DOE strategic goals. ANL will conceive, design, construct, and operate world-class user facilities, all in a safe, environmentally sound and efficient manner.

Contractor Management: The University of Chicago will provide leadership, guidance, and oversight that add value to the overall management of ANL.

Operations: ANL will conduct all work and operate facilities cost effectively and with distinction, integrated with and supportive of its missions in science, technology, energy, and environment, while being fully protective of its workers, its users, the public, and the environment.

As required under the contract, individual performance measures and system assessment measures were established for these three overarching performance expectations.

2.0 Background:

Beginning in June 1995, the DOE has maintained a performance-based contract with the University of Chicago for the management and operation of Argonne National Laboratory (ANL). This performance based contract will expire in September 30, 2006.

In accordance with the terms of the ANL contract, ASO establishes formal performance expectations at the beginning of each fiscal year and evaluates the performance of the University of Chicago against those performance expectations at the end of each fiscal year. For FY-05, Appendix B of the ANL contract includes two performance categories. These two categories are Mission Critical Performance Measures (aka Performance Measures) and General Operations System Assessment Measures (aka System Assessment Measures). Both of these performance categories are evaluated annually using a pre-defined process (Appendix A). A formal evaluation by ASO is a key part of the annual rating process. This report is the documentation of that annual rating process. The first performance category, "Mission Critical (Performance Measures)", or Performance Measures as referred to within this report, are tied directly to the annual fee

earned by the University of Chicago. For FY-05, there are four Performance Measures. The second performance category, "General Operations (Systems Assessment Measures)" or SAMs is not tied directly to fee. For FY-05, there are twelve SAMs.

For FY-05, the Performance Measures that directly impact fee include four areas: 1) Science and Technology, 2) Contractor Management, 3) Integrated Safety Management, and 4) Infrastructure. All of these Performance Measures are considered critical to successfully achieving the ANL Science and Technology Mission. Critical is defined historically as having a direct and significant impact on the ability of ANL to successfully achieve the outstanding science and technology mission. For the twelve SAMs, these measures are considered important to ANL successfully achieving their science and technology mission, but for FY-05 have not been deemed to be critical to the successful accomplishment of the ANL mission. If the data demonstrates that a SAM is directly and significantly impacting ANL's ability to meet its science and technology mission, then it will be considered as having an impact on fee.

Appendix B of the ANL contract requires the University of Chicago to perform an annual self-assessment that is considered by the ASO in its overall evaluation of the University of Chicago performance. The University of Chicago Self-Assessment provides data including accomplishments and self-identified opportunities for improvement that assist in determining the complete picture of the University of Chicago performance. ASO believes that an outstanding management process would self identify significant areas of weakness and develop corrective actions for those weaknesses. ASO reviewed the University of Chicago Self-Assessment to determine the overall self-assessment quality and completeness. This includes issues that the University of Chicago self identified, as well as significant activities/issues that the University of Chicago did not identify in their self-assessment that would support an increase or reduction in their final rating for the assigned functional area. In general, the University of Chicago self-assessment met the test for quality and completeness.

For the Science and Technology Performance Measure, the University of Chicago conducts a highly regarded peer review process as a key part of its self-assessment. Copies of the documented peer reviews are provided to ASO and appropriate DOE-HQ Program sponsors. A critical component of the annual performance evaluation is a separate evaluation of the ANL science and technology work by the sponsoring DOE Headquarters (HQ) Program Offices. The DOE-HQ Program sponsors evaluation includes, as input, the results of the University of Chicago Science and Technology self-assessment.

The ASO evaluation includes both the "objective" Contract performance expectations for each area and the relevant "subjective" aspects that include significant accomplishments, opportunities for improvement, results of other appraisals, and any other data that is relevant to the Laboratory's performance. The overall process for evaluating ANL performance and determining the annual fee is described in Attachment A to this report.

For FY-05, the University of Chicago was rated as "Outstanding" (the highest rating) for the Science and Technology and Contractor Management. A "Good" rating was given for the Integrated Safety Management Performance Measure. The ANL-E Infrastructure Performance Measure was rated as "Outstanding". For the twelve General Operations

System Assessment Measures (SAMs), the University of Chicago received an overall rating of "Outstanding". An "Outstanding" rating means that ANL significantly exceeds the standard of performance; that noteworthy results have been achieved. An "Excellent" rating means that ANL exceeds the standard of performance, although there may be room for improvement in some elements; better performance in all other elements more than offset this. A "Good" rating means that ANL meets the standard of performance, while deficiencies do not substantially affect performance. A fee table in the contract, negotiated each year along with the individual performance measures, is used to determine the annual monetary fee earned based on the assigned adjectival ratings.

A detailed evaluation of the twelve SAMs by ASO confirmed that an overall "Outstanding" rating was appropriate. This means that the University of Chicago performance in General Operations exceeds the standard of performance established for management and operating contractors for multi-purpose laboratories. For some SAMs, there remains room for improvement but, in general, better performance in other areas more than offset the areas in need of improvement.

ASO also performs mid-year and third quarter assessments. These assessments are important input to the final ratings. The overall objective of these mid-year and third quarter assessments is to provide performance appraisal information to the UofC/ANL management that represents an interim report card of UofC/ANL performance and allows UofC/ANL to understand any identified weaknesses, concerns, and/or issues while providing UofC/ANL an opportunity to improve their performance as needed prior to a final year-end evaluation.

Appendix B of the ANL contract contains the FY-05 performance expectations that are the basis for measuring UofC/ANL performance and determining a performance rating. The FY-05 end-of-year ratings developed by ASO are based on inputs from a variety of sources, including:

- 1) the quality and completeness of the ANL self-assessment, as well as ANL initiatives to maintain or enhance performance
- 2) results from the ASO operational awareness activities in developing a "sense of the Laboratory"
- 3) periodic status meetings/discussions between ASO and ANL staff and management on a variety of topics
- 4) performance input from the Chicago Office (CH) Subject Matter Experts in those areas where significant activity/interactions have occurred
- 5) ASO reviews of ANL performance evaluations, such as functional reviews or topical reviews
- 6) ASO reviews of available audits, assessments, reviews, etc. conducted by the DOE-IG, DOE-OA, DOE-EH, DOE-OE, SC-HQ, and others
- 7) feedback from the Office of Science on a variety of topics, particularly the Science and Technology Programs at ANL.

End-of-Year Summary Results:

There were a number of significant achievements made by the University of Chicago/ANL during FY 2005. These include the following accomplishments:

- 1) The transition of ANL-W to the Idaho National Laboratory went extremely well. This required considerable planning and attention by ANL management as well as flexibility in responding to requests from DOE.
- 2) APS operations continue to achieve very high X-ray availability. For FY-05, the APS increased the X-ray availability (98.6%) for user beam while also increasing the number of unique experimenter.
- 3) IPNS run cycles continue to maintain very high reliability in FY 2005.
- 4) Notable progress on the construction of the Center for Nano-Scale Materials Project continues with the full expectation that it will be completed within cost (\$72M) and schedule (building in 4/06 and equipment in 9/07).
- 5) ANL's participation as a partner in the Linac Coherent Light Source Project at SLAC is going very well.
- 6) ANL was awarded four R&D 100 Awards for FY-05. No other DOE Laboratory won more awards than ANL. These awards included the following: Multilayer Lens Wafers for X-Ray Lenses; MPICH2 Release 1.0 High Performance, Portable Implementation of the Message Passing Interface Standard for Parallel Computing, Self-Contained Battery-Powered bion7 Microstimulator with Rechargeable Miniature Battery; High-Temperature Potentiometer Oxygen Sensor with Internal Reference.
- 7) ANL has continued to maintain a very positive working relationship with the local communities surrounding the ANL site.
- 8) ANL obtained continuing financial support from the State of Illinois for the Center for Nanoscale Materials and a commitment for guaranteeing bonds for the proposal for a Third Party Financed Building at ANL.
- 9) ANL was selected by the National Association of Business Resources as one of the forty best companies to work for in the Chicago area and ANL received a separate award for having the "best practices" of any company in the area of "Diversity and Multi-Culturalism."

With the exception of the Integrated Safety Management self-assessment, the ANL self-assessment ratings are in agreement with the ASO performance ratings. ANL will need to continue to focus management attention on Environment, Safety and Health to ensure that the DOE expectations for the Integrated Safety Management Program are being achieved. Table A is a summary of the FY 2005 ANL end-of-year self-ratings and a comparison of the ASO ratings by performance area. An explanation of the resulting ASO ratings is also provided in this report.

Performance Measure Ratings and Comments:

This section discusses the performance ratings assigned by ASO for the ANL contractual performance measures. Known issues that could impact the performance rating at the end of the fiscal year are also discussed. The ASO rating, supporting data and the issues and comments associated with the fee-bearing Performance Measures are:

- 1) ASO assigned an "Outstanding" rating to the **Contractor Management Performance Measure** for FY-05. The objective of the Contractor Management performance measure is to ensure that the University of Chicago provides the necessary leadership, guidance, and oversight that add value to the overall management of ANL. ASO determined that the University of Chicago provides the necessary leadership and remains actively involved in the management of

ANL. The University of Chicago Board of Governors, which provides the structured leadership function for the University of Chicago to manage ANL, was expanded in FY-05 to include members from Northwestern University and the University of Illinois. The Board of Governors also established a Science Policy Council to strengthen the ties with these well-respected mid-western universities as well as to generate more opportunities for world-class science to be performed at ANL. The University of Chicago continues to use "joint appointments" to support the enhancement of the science and technology programs at ANL. The Joint Appointments Program includes the University of Chicago, Northwestern University, University of Illinois and others. In addition, the University of Chicago President continues to remain very personally engaged in key ANL issues and initiatives. During FY-05, the University of Chicago selected a capable new Laboratory Director, Dr. Robert Rosner to lead ANL.

During FY-05, the University of Chicago participated in the development of the ANL Business Plan and ANL scientific program development. The University of Chicago is an active contributor to many ANL science and technology programs, such as biology, chemistry, and nanotechnology and their involvement continues to be highly regarded. The ANL/University of Chicago Computational Institute which operates the National Science Foundation TeraGrid is a notable example of cooperation. The ANL Board of Governors conducted six scientific peer reviews in FY-05. These are: Energy Technology, Physics, High Energy Physics, Chemistry, Intense Pulsed Neutron Source, and Math and Computer Science. For ANL operations, the Board of Governors was engaged in the continuing review of the Plant and Facilities function at ANL and they reviewed the healthcare costs and the administration of healthcare at ANL where recommendations resulted in estimated cost savings of \$13M over the next 3 years.

Communication with DOE remains noteworthy. Finally, the University of Chicago has been very responsive. The only opportunity for improvement involves the communication associated with the selection of a new Laboratory Director where additional communication associated with these twice a decade events need some additional structure. The net result is that Contractor Management is rated as an "Outstanding" with a point scored of 3.8.

- 2) **For the ANL-W Infrastructure Performance Measure**, ANL is rated as "Outstanding". This performance measure covers the transition period from October 1, 2004 through January 31, 2005 when ANL-W was being transferred to the Idaho National Laboratory which is now a separate DOE contract. All ANL-W work is covered under an annual Project Implementation Plan (PIP) which is approved prior to the start of each fiscal year. The PIP includes cost and schedule baselines for the work. Performance is assessed through a determination of "earned value" and calculated variances from the PIP baseline. The cost and schedule variances are then used to determine a final rating. For FY-05, the ANL rating includes the conduct of the research and development programs at ANL-W through January 2005, as well as the development and implementation of a detailed transition plan for the transfer of ANL-W to the Idaho National Laboratory. Variances range from 0% to 2% for the individual Measures. An official transfer agreement was signed. ANL is to be congratulated on a very orderly and successful execution of the Transition Plan.

On November 4, 2005 the DOE Deputy Secretary wrote to the ANL Director thanking them for their efforts in developing a vision for the role of science and computing in Nuclear Energy, as well as for their efforts in the advanced integrated energy systems simulations. This letter resulted from a meeting on the previous ANL nuclear programs work and a tour of the experimental facilities in October 2005.

- 3) **The Integrated Safety Management Performance Measure** has been rated as "Good" by ASO. The objective of the ANL Integrated Safety Management System (ISMS) is to prevent or minimize potential adverse effects on workers, the public, property, and the environment as a consequence of Laboratory activities. The ISM Program also ensures that the ANL Environment, Safety, and Health (ES&H) Program is applied effectively by line management as an integral part of the R&D mission of the Laboratory. Integrated Safety Management is one of the four FY-04 Mission Critical Performance Measures that focus on the operation of the Laboratory. ISM performance accounts for 20% of the fee.

The ASO evaluation of the ANL ISM Program is based on objective data that are directly related to the ISM Performance Measure, as well as objective and subjective input that comes from a variety of sources, such as ASO ES&H Functional Area Reviews, Facility Representatives' observations, audits, inspections, appraisals, various operational awareness activities, and periodic status reports such as the ANL Mid-Year Report. The ANL FY-05 Self-Assessment is also an important source of information.

The Integrated Safety Management Performance Measure has been rated "Excellent" by ANL but "Good" by ASO. Although ASO agrees that the objective performance measure rating is "Outstanding," significant concerns about the effectiveness of the ANL ISM program lead to an overall rating of "Good." Reviews conducted in FY-05 by DOE Price Anderson Amendments Act (PAAA) Office of Enforcement (OE), Office of Independent Oversight and Performance Assurance (OA), DOE Laboratory Accreditation Program (DOELAP), and DOE/HQ-SC on Electrical Safety, all identified weak implementation of the ISMS. Of particular concern are the nuclear and radiological safety programs and operations which is about 5% of the ANL effort.

ANL FY-05 ISM Accomplishments:

For FY-05, ANL achieved an "Outstanding" rating in three of the four ISM contractual performance objectives and an "Excellent" rating in the fourth performance objective. These objectives identify a series of important numerical targets where ANL performance is compared and rated. ANL Total Recordable Injury (TRI) Rate and Days Away Restricted or Transferred (DART) continued to improve in FY-05. Although ANL did not achieve the DOE targets, improvements occurred and there were no serious injuries at ANL in FY-05. For FY-05, ANL management correctly focused on ISM improvements in the Plant and Facilities Services Division (construction, maintenance, janitorial services, etc.) during FY-05. This effort successfully reduced the numbers and types of injuries by about 30%. FY-05 ANL radiation exposures continued to decrease in FY-05, where the collective radiation exposures were only 60% of the limit, all ANL Divisions achieved their ALARA Goals, and no employee exceeded the 10CFR835

exposure limits. Nuclear operations resulted in no unplanned exposures. ANL reduced waste generation for five key waste streams and developed five pollution prevention action plans for continued waste reduction. As planned, ANL completed the corrective actions for the list of OSHA deficiencies that were identified in a FY-03 review. ANL management conducted an employee survey of ANL workplace safety in FY-05. The results of the survey indicated that 94% of ANL employees believe that ANL is a safe place to work. During the OA review in May 2005, they indicated that "ANL personnel are typically very experienced, and many work activities are performed with a high degree of safety".

Although not all the FY-05 legacy waste disposition targets were met, ANL made significant progress towards eliminating the waste backlog by the end of FY-06. Progress was also made towards disposal of another difficult waste stream, the JANUS converter plates. In the area of land management and habitat restoration ANL made noticeable progress in completing land management and habitat restoration activities this year and has begun to integrate habitat management practices into the grounds management program. And although effectiveness has yet to be confirmed, ANL is making good progress toward completing on schedule its corrective actions in response to the OA review.

ANL FY-05 ISM Issues:

ASO concerns include inadequate ES&H controls on work, inadequate resources for performing implementing ISM functions, inadequate resources for managing nuclear facilities, and a general lack of effective oversight. Some examples of inadequate ES&H controls for performing work were demonstrated by the discovery of three undeclared nuclear facilities, Center for Nanoscale Materials (CNM) gas leak, failure to follow transportation safety manual requirements, and delays and missed schedules in meeting commitments associated with storm water management and wetland protection at the CNM Project.

The need to evaluate resources dedicated to the implementation of the ISM Program was identified in the ANL mid-year assessment and little progress has been evidenced in identifying and assigning adequate environment, safety, and health resources throughout the laboratory to carry out the ISM Program. ASO requested but did not receive a complete Environment, Safety, and Health (ES&H) Management Plan that analyzes ES&H needs throughout the laboratory, assesses resources required to meet these needs, quantifies the resources allocated, and candidly discusses unmet needs.

Neither the day-to-day interactions between ASO and ANL nor the ANL FY-05 Self-Assessment Report demonstrate effective ES&H oversight. The ANL ISM Systems Description Document specifies that input from both ANL Division Management Assessments and Independent Assessments be included in the annual self-assessment report to DOE. Neither has been included in the FY-05 report. The Management Assessments and Independent Assessments should be cornerstones of the ANL ISM and QA Programs and these assessments are critical to evaluating ES&H performance, providing feedback, and improving the ISMS. The ASO FY-05 mid-year assessment identified the need to review the

implementation of ES&H requirements throughout ANL divisions; the ANL self-assessment report provided no evidence that this was done.

The Office of Independent Oversight and Performance Assurance (OA) Review conducted in May 2005 identified a number of significant deficiencies with the operation of the ANL nuclear facilities. These deficiencies describe a program that lacks adequate resources, control, rigor, and management attention to ensure that the nuclear facilities can be operated to DOE requirements. The loss of the DOE Laboratory Accreditation Program (DOELAP) certification is an indication that management controls were also not adequate for the radiation dosimetry program. While ANL was the last of the SC Laboratories to undergo an SC-wide energized electrical work (EEW) review, 29 findings were identified. It is unclear what actions were taken by ANL to review their electrical safety program prior to the review and learn from the issues identified during preceding reviews at other SC Laboratories.

In summary, ASO rates the ANL FY-05 ISM Program "Good" with a score of 2.0. Although there have been some ES&H improvements in the past year, the DOE reviews have identified a number of significant deficiencies in the ISM System at ANL. Increased attention and management commitment to integrating ES&H into doing work, allocation of ES&H resources, and ISM oversight are needed to achieve the level of ISM performance that DOE expects.

- 4) The FY-05 ANL **Infrastructure (ANL-E) Performance Measure** is rated by ASO as an "Outstanding". The ANL Infrastructure Performance Measure which encompasses ANL's performance in the areas of Project Management and Facility Management represents 10% of the total possible fee. The objective of the Infrastructure performance measure is to ensure the implementation of an infrastructure management system that will provide and maintain a highly reliable, cost effective and exceptional infrastructure to support world class science and technology. Specific activities associated with the ANL infrastructure management include construction, upgrades, maintenance of facilities and infrastructure, and environmental projects. The ASO evaluation of the ANL Infrastructure Program is based on objective data directly related to the Infrastructure Performance Measure as well as information from various operational awareness activities and the ANL FY-05 Self-Assessment.

In FY-05 ANL's performance in the area of Project Management continued to meet or exceed expectations. ANL successfully completed one multi-year major project (Mechanical Control Systems Upgrades - Phase I) and completed all elements of the first ESPC project at the site. ANL's performance in the area of baseline compliance earned a rating of Outstanding for cost compliance and Excellent for schedule compliance for FY-05 projects. At the end of FY-05 one new construction project, the Sub-Angstrom Microscopy and Microanalysis (SAMM) Laboratory, was approximately two months behind schedule. This variance was offset by a change in the beneficial occupancy date by the customer. To support this change, a revised contracting strategy for the project was developed, which included the impacts of winter weather, and the project was rebaselined in November 2005. The new project strategy includes the use of two independent cost estimates as the basis for conducting value engineering. This will result in a revised project scope for the building so that the technical

baseline meets the basic technical requirements of the building at the lowest possible cost

It is noted that ANL has made significant strides in implementing a number of project management improvements on a sitewide level and within the Plant and Facilities Services Division. Most notable were the laboratory initiatives related to increased application of value engineering principals in the management of small infrastructure related projects and activities; implementing more formality and discipline in the planning and execution of infrastructure related activities and projects and the development of a sitewide Project Management Information System (PMIS). In FY-06 we look forward to continued improvement in this area as ANL completes the remaining actions including full deployment of the PMIS and prepare for sitewide Earned Value Management System certification.

Maintaining the ANL infrastructure has consistently been a Laboratory priority for the last 10 years and will continue to be a major challenge for the upcoming years. ANL performance in maintaining the Laboratory infrastructure continues to be exemplary. When compared to the suite of Office of Science Laboratories ANL continues to be recognized as above average and a leader in the area of Infrastructure Management. In the area of Facility Management, ANL performance metrics for maintenance investments, and energy management were "Outstanding". While the Asset Condition Index metric was rated as Excellent (.96), the Lab performance is still better than the SC goal of .95. An important note here is that the Lab's review and analysis of the facility deficiency database conducted in FY-05 resulted in a more defensible Deferred Maintenance list of needs and a more realistic picture of the condition of the physical assets which led to FY-06 SC funding in support of reducing the deferred maintenance backlog.

The Laboratory's emphasis on cost reduction for Waste Management in FY 2005 is commendable, and has resulted in significant cost savings to DOE. Waste Management operations are in compliance with DOE Orders for all hazardous wastes. Staffing seems to be sufficient to dispose of annual routine radioactive and hazardous wastes generated from research and operations. While cost reductions are a great benefit to DOE, some of the reductions in staffing could impact an aggressive radioactive waste disposal program planned for FY-06 that involves multiple, simultaneous radioactive waste and material disposal projects. This includes the RH-TRU campaign, unused radioactive material disposition (some of which has been in storage for decades), completion of "Old Waste" disposition, and special projects such as New Brunswick Laboratory nuclear material repackaging, while still maintaining the routine waste disposal operations. ANL needs to ensure that adequate planning and associated resources are in place to accommodate FY-06 requirements. A separate plan will be needed for newly generated CH-TRU waste, now that the previous CH-TRU campaign has been completed.

Although ANL continues to be aggressive in the identification and execution of construction and maintenance activities and projects to ensure that the ANL physical plant and facilities are ready to serve the needs of the ANL research community, ANL needs to continue to place emphasis on implementing opportunities for more cost effective use of maintenance funds as out year

projections for direct funded infrastructure projects continue to decline. We are encouraged that ANL recognizes this and stress that ANL continues to actively participate in benchmarking studies/reviews and Departmental and SC Infrastructure Management initiatives to identify and/or deploy operational and productivity improvements in FY-06.

In summary, ASO agrees with the ANL Self-Assessment and assigns a final rating of "Outstanding" with a numerical point score of 3.7.

System Assessment Measure Ratings and Comments:

This section discusses the performance ratings assigned by ASO for the ANL System Assessment Measures. Known issues that could impact the performance rating at the end of the year are also discussed. The ASO rating, supporting data and the issues and comments associated with the non fee-bearing System Assessment Measures are:

- 1) For the **Counterintelligence (CI) System Assessment Measure**, ASO rated ANL as "Outstanding" for FY-05. The objective of the ANL CI Program is to detect, deter and counteract attempts of foreign powers to illegally obtain information from ANL. This is accomplished through working closely with agencies responsible for protecting the U.S. from threats and educating ANL employees of these threats. Major elements of CI Program include inspections, foreign visits and assignments, cyber security, training, analysis and threat assessment. ANL remains in compliance with the applicable DOE Orders, Presidential Decision Directives, and public laws. During FY 2005, ANL initiated a terrorist threat assessment and conducted approximately 2000 host briefings. ASO examined the CI activities associated with the ANL Work-for-Others and CRADA Programs. ASO examined the completeness and quality of documentation for: sensitive WFO/CRADAs, quality of the CI checks, conduct of briefings/debriefings, and actions taken to resolve issues. A Lab-wide CI refresher training course was conducted during FY-05. No significant issues were identified during the review. Much of the CI training is appropriately web-based to reach the largest number of ANL employees. The foreign visits and assignments portion of the CI program continues to be well run.
- 2) For the **Cyber Security System Assessment Measure**, ASO rated ANL "Outstanding" for FY-05. The objective of the ANL cyber security Program is to establish appropriate protection for the ANL computer systems and data while maintaining the environment necessary to effectively conduct the Laboratory's business. The ANL rating is supported by the Laboratory Director's personal commitment to Cyber Security at ANL; outstanding leadership by the ANL Chief Information Officer; a small but qualified Cyber Security team; correcting identified vulnerabilities in a timely manner; and formalized ANL Cyber Security processes. During FY-05, there were eleven ANL cyber security incidents, which is below the average of 14 observed the past five years. Incidents are promptly reported to CIAC to ensure that others in the DOE complex are aware of current cyber security issues. A Laboratory-wide risk assessment was conducted with residual risks accepted by the Laboratory Director. External scans of the Laboratory are initiated automatically without human intervention. Deep scans are conducted inside the firewalls, using

multiple vulnerability assessment tools so that all hosts are scanned annually. The Laboratory undertook a smart card pilot and has become a leader in the DOE complex with regards to HSPD-12. ANL established a warm disaster recovery site at Fermi National Accelerator Laboratory (FNAL) demonstrating effective use of existing DOE resources. ANL prepared certification packages for all five ANL computer enclaves and ASO has issued an accreditation letter. Subsequently, the DOE Inspector General identified some issues with the ANL certification and accreditation process and because this is a new process within DOE, ANL is revising its certification and accreditation processes to better reflect the National Institute of Standards and Technology (NIST) requirements.

- 3) ASO has assigned a rating of "Outstanding" for the **Diversity System Assessment Measure**. The objective of this performance area is to strengthen equal opportunity, affirmative action and workforce diversity at ANL. This rating is supported by a review by the Chicago Office specialist for Diversity Programs. ANL met the FY-05 performance expectations. Four diversity metrics were established that were evaluated as part of the Human Resources Balanced Scorecard. Diversity Action Plans were developed during FY-05 and they are being implemented. The full results of the Diversity Action Plans will be further reviewed in FY 2006. Diversity Action plans were developed by each ANL Associate Lab Director, which provided an opportunity for every ANL employee to be engaged in the diversity process. The ANL self-assessment adequately addresses FY-05 actions that were taken to address previously identified opportunities for improvement. In addition, ANL self-identified additional opportunities for improvement during FY-06. ANL made progress in developing a more diverse organization during FY-05, even though there was extensive downsizing, budget constraints and limited hiring. It is notable that workforce trends indicate increased diversity representation in the Officials and Managers and Professional occupational categories. During FY-05, ANL focused on improving diversity representation in the ranks of postdoctoral appointees as this represents the pipeline for meeting future diversity goals. Trend analyses by gender and historically underrepresented minorities, indicated that representation of these diverse groups in the Post Doctorate Program had been stagnant.

ANL top level management commitment to diversity and placing a strategic focus on diversity is notable. During FY-05, there was a 4% increase in both the number of women and underrepresented minorities in the category of Managers and Professionals. ANL pursued a number of diversity activities during FY-05 and was recognized for their diversity commitments. ANL was recently selected by the National Association of Business Resources as one of the forty best companies to work for in the Chicago area and ANL received a separate award for having the "best practices" of any company in the area of "Diversity and Multi-Culturalism." The award focused on the "extent to which the organization is open and inclusive to people of differing human qualities, promotes a tolerant work environment, and considers diversity and multi-culturalism to be a competitive advantage." ANL continues to do an excellent job with the Diversity Council which allows a high-level strategic focus of diversity. During FY-05, the Council has identified several initiatives which are focused on targeted recruitment. Various outside workshops and seminars were held which makes students aware of ANL as a place to work. For example ANL, the University of Chicago, and SC

jointly hosted the 19th annual National Conference of Black Physics Students in February 2005. These types of efforts greatly assist the pipeline efforts.

- 4) For the **Financial Management System Assessment Measure**, an "Outstanding" rating is assigned. The overall objective of the ANL Financial Management SAM is to ensure that ANL's financial system is sound, responsive, and has economical financial management programs that assure the safeguarding of DOE financial assets. This rating was coordinated with the Chicago Office (CH) accounting, budget and oversight groups. The "Outstanding" rating was based on the review of the UofC/ANL self assessment, as well as various DOE reviews such as budget validation, quarterly travel, functional costs, LDRD certification, internal audit reports and numerous meetings/discussions held with ANL. The ANL cost accounting system is in compliance with Cost Accounting Standards, and the ANL Disclosure Statement is current, accurate, and complete. ANL performance is consistent with meeting all four FY-05 financial performance measure expectations. A notable FY-05 accomplishment was the successful transfer of financial information on ANL-W to the INL. ANL was responsive and worked closely with CH and ASO to implement the new DOE financial reporting system (STARS). During FY-05, ANL implemented a new overhead management system. Also in FY-05, ANL implemented changes in the ANL Travel management system that resulted in cost savings of approximately \$200K and changes in the Payroll system which resulted \$70K in savings.
- 5) For the **Human Resources (HR) System Assessment Measure**, ASO with the support and concurrence of the CH HR Organization have assigned the UofC/ANL an "Outstanding" rating. The objective of the ANL HR System is to work in partnership with the Programmatic and Operations organizations to develop an understanding of their needs and support their strategic objectives by developing and implementing programs that attract, develop, compensate, and retain a qualified staff while promoting diversity. ASO has determined that the ANL HR organization consistently seeks new ways to enhance communication, improve systems, increase cost savings and aggressively takes steps to ensure compliance with laws, DOE policy, and the Contract.

The FY-05 evaluation of the ANL HR performance is based on the seven Balanced Scorecard measures; performance highlights categorized as Process Improvements, Partnerships/Teams, Cost Reduction/Avoidance and Other achievements, and Staff Development and Management, Compliance Items; and a report on actions taken to address the opportunities for improvement identified in the 2004 assessment. In addition to these specific categories an important FY-05 accomplishment was the successful transfer of ANL-W employees to the Idaho National Laboratory which included benefits transfers, records retirement, and other tasks to ensure a smooth and orderly transition.

ANL HR consistently exceeded their Balanced Scorecard goals which were established by ASO at the beginning of the FY-05 performance period. ANL was vigilant in seeking cost saving opportunities for staff benefits. During FY-05, though competition ANL changed the medical, dental, and life insurance programs which resulted in an estimated \$3.8M annual savings. A "Wellness" Program was also put in place that included additional health screening

programs and a partnership with Edwards Hospital to provide personal wellness profiles as part of the Lab's Health Fair. These wellness programs will most likely, although not easily measurable, provide additional cost savings to the benefits program. A process to automatically schedule physical examinations based on Job Hazard questionnaires ensures timely medical review of individuals in positions that could pose hazardous exposure risk, another potential savings in medical monitoring.

During FY-05, ANL instituted other enhancements to the HR Program that will save time and effort. ANL automated desk top access on HR Programs for all employees. Employees can now electronically access data on the Visa Administration system and Joint Appointment systems and electronically submit performance appraisals. ANL HR developed a new tool, i.e. HR Actions Quick Reference Guide which modified the new employee hiring process to include badge number assignment, as well as issuance of computing account and log-on that are now part of the revised employee orientation session. Other initiatives included enhancing the information available for Post-Doctorate employees by launching a website for postdocs and creating a new DVD for new employee orientation. The HR staff continues to fine tune their web-based HR information systems from year to year which provides just-in-time information to employees across the Laboratory.

Other enhancements during FY-05 included modifying the Applicant Information System and updating 41 policies and procedures in the HR Policy and Procedures Manual. To ensure compliance with the prime contract, DOE requirements, and federal and state law, ANL conducted assessments/reviews/audits during FY-05 in the following areas: HIPPA, ERISA, Small Business Job Protection Act, Women's Health and Cancer Rights Act, Economic Growth and Tax Relief Reconciliation Act, Visa status, and Hires, terminations, transfers, promotions, and applicant flow and the Joint Appointment Process.

Also during FY-05, ANL successfully conducted contract negotiations with various bargaining units in an effective and efficient manner with agreement reached in timely fashion. The negotiation and signing of Collective Bargaining Agreements has been a notable performance area for ANL for quite some time.

ANL was successfully selected as one of forty recipients in Chicago's 101 Best and Brightest Companies to Work for; and won one of ten specialty awards – the Diversity and Multiculturalism Best Practices Award. ANL performed a series of actions on the FY-04 Opportunities for Improvement, identified in their FY-04 end-of-year self-assessment. These opportunities included a review of record retention practices, exploring strategies for improving the communication of relevant HR information to programmatic and OPS division with the hope of integrating HR and Diversity Office statistics, and to look for opportunities to give employees greater flexibility in making adjustments to their personal benefits are well on their way with final implementation expected in the near future.

- 6) **For the Information Management (IM) System Assessment Measure**, ASO assigns a rating of "Outstanding". Information Management includes information technology and telecommunications management. The objective of the IM

System is to manage ANL information activities in accordance with applicable laws, regulations, and contract requirements and to establish sound business practices to achieve strategic ANL Information Technology goals.

During FY-05, ANL completed all its planned FY 2005 software and hardware projects supporting a pre-certification review by DOE in December 2005. The projects included modifying remaining legacy business systems to accommodate a new Work Breakdown Structure, acquiring and installing the hardware and the Primavera Enterprise Project Management suite of products, and developing a new Project Effort Reporting System.

ANL replaced its Private Branch Exchange, PBX, ahead of schedule and worked with a telecom services company to complete the installation of a dedicated on-site Nextel cellular tower. ANL completed the last phase of a multi-year project to consolidate its Unix based Oracle database servers, web servers and application servers. The FY 2005 project also included the installation of a shared Storage Area Network (SAN) disk array.

During the first half of FY-05, ANL transitioned a large amount of business data to the Idaho National Laboratory within a very aggressive project schedule that was completed in January. This was a very challenging activity in that the data transfer requirements were not fully known until November or December. At INL's request the Laboratory created and continues to provide a hosting service through December 2005 for INL to use Argonne's Chemical Management suite of systems.

In summary, during FY-05 ANL successfully completed business systems to prepare for a December-January certification review by DOE for its Project Management and Earned Value Management Systems; replaced the aging Private Branch Exchange (PBX); completed the last phase of a multi-year project to consolidate database, web and application servers within Operations; and effectively transitioned ANL-W data and applications to the new Idaho National Laboratory.

- 7) For the **Safeguards and Security System Assessment Measure**, ASO assigned an "Excellent" rating for FY-05. The objective of the Integrated Safeguards and Security Management (ISSM) Program at ANL is to provide the necessary and appropriate protection for special nuclear material, information, personnel, and property. As required by DOE Order 470.1, the ANL Integrated Safeguards and Security program was evaluated for its effectiveness in the following sub-programs:

- 1) Information Security
- 2) Personnel Security
- 3) Materials Control and Accountability
- 4) Protective Force
- 5) Security Alarms

While ANL provided an overall self-assessment rating of "Outstanding" for ISSM FY-05 performance, DOE-ASO has taken exception to this rating, and rates the FY-05 ISSM performance as "Excellent". This ASO-assigned rating is based

on continuing deficiencies identified in the ANL Materials Control and Accountability (MC&A) area, as identified during a recent Safeguards and Security Survey. Although the MC&A area constitutes only one of the five evaluated ISSM sub-programs, the deficiencies noted are considered significant enough to affect the overall ISSM performance evaluation. Due to the sensitivity of the subject matter, specific details will not appear in this report.

The ANL rating includes the positive results from the Special Review conducted by the Assistant Secretary for Environment, Safety and Health in April and May 2005. The ANL Foreign Visits and Assignments and Export Controls Programs continue to be highly regarded.

- 8) For the **Legal Management System Assessment Measure**, an "Outstanding" rating has been assigned. The objective of the ANL Legal Services System is the management of legal services in an efficient and cost-effective manner that protects the interests of ANL and DOE. In addition, work products submitted by ANL for DOE approval or use are supported by timely, sound and thoroughly researched legal advice. The ANL rating resulted from a detailed review performed by CH which consisted of an evaluation of the ANL self-assessment; a review of documents concerning ANL implementation of Alternate Dispute Resolution for individual cases; a review of files regarding compliance with the DOE Legal Management Rule 10 CFR Part 719; discussions with ANL staff attorneys on individual case strategy and status; and consideration of information provided at periodic meetings between ANL and CH staff.

The ANL logging and tracking system reported 810 legal items submitted to DOE during FY-05. The list is an excellent tool for DOE, providing a complete record of the volume and type of legal support provided, and the timely resolution of issues.

ANL continues to be diligent in their satisfaction of Legal Management Requirements. During FY-05, no major non-compliances or minor non-compliances were identified. ANL attorneys also met frequently with CH to discuss new cases and important milestones. Invoices for outside legal services demonstrate the negotiation of significant discounts regarding assistance by outside attorneys and for other extraneous unallowable costs. ANL is doing an exemplary job of monitoring legal costs. ANL management of litigation goes far beyond mere compliance with DOE requirements. Cost management was particularly evident this year, as the ANL Legal Department was able to persuade four plaintiffs to withdraw their frivolous or misdirected complaints.

ANL increased the number of invention disclosures and patent applications for the third consecutive year. Copyright requests submitted by ANL continue to be appropriate and complete, enabling DOE to readily provide approvals. ANL continues to request appropriate duration of limited U.S. Government licenses and forwards approved software to DOE Office of Scientific and Technical Information (OSTI). In addition, several software items have reached the initial five (5) year period for copyright assertion, and the laboratory has taken the appropriate steps, and provided justifications, for those items that copyright assertion is necessary beyond the initial five year period.

The ANL self-assessment report for the Legal Management System continues to be of the highest quality. ANL dedicated significant effort in documenting performance against the performance expectations, reporting significant accomplishments, customer feedback, opportunities for improvement, and actions taken to address opportunities for improvement identified in previous self-assessments.

ANL demonstrated very strong performance in the area of dispute management. For example, ANL resolved ten of twelve complaints against them in FY-05 (five litigation cases and five agency complaints). Early resolution of disputes, plus in-house handling of personnel complaints and negotiation of discounts to outside counsel invoices, have resulted in significant cost savings.

During FY-05, ANL established a Conflict of Interest (COI) Officer and Ethics & Compliance Officer, as well as an Ethics Hotline. More than 46 hiring determinations and outside employment requests were reviewed for conflict of interest, and the COI form improvements, are important efforts in avoiding ethics violations and potential disputes.

In summary, the overall ANL legal services are of high quality, timely, and cost effective. The self-assessment in this area is complete and of high quality. ANL continues to take steps that increase invention disclosures, minimize legal costs, protect ANL data, and strengthen the ANL ethics program. ANL has been diligent in its oversight of outside counsel support and the tracking system is effective in ensuring the timely completion of actions. Good communication and a close cooperative working relationship between ANL and DOE have helped to ensure the timely resolution of issues.

- 9) **For the Property Management System Assessment Measure**, ASO rates ANL's performance in property management as "Outstanding". The objective of the ANL Property Management System is to provide necessary systems for the accountability, protection, control, use and disposal of government property. The rating was coordinated with the Chicago Office Property Management Specialist. The ANL Property Management System is certified through FY-06. Since the responsibility for ANL property management was reassigned to the ANL Procurement Department on March 1, 2004, significant improvements were made in the property management program. These improvements include enhanced communication between ASO and ANL, an increase in the control of subcontractor held property and additional property walk-throughs which now include all operating and storage areas. Missing property typically is less than one-half of one percent. ANL has developed an on-line Divisional Property Representative (DPR) training class for all DPRs. The on-line training course was completed and was implemented using the ANL Training Management System (TIMS) for all ANL staff assigned as DPRs. ANL updated their property manual in FY-05 and successfully transferred all ANL-W property to the INL. The FY 2005 Property Management Balanced Scorecard results were also an important factor in the end-of-year evaluation.
- 9) **For FY-05, the ANL Procurement System Assessment Measure** was rated as "Outstanding". The objective of the ANL Procurement System is to support the research program and the infrastructure/facilities operations at ANL by providing

effective, timely, and cost-efficient acquisition management in accordance with the ANL contract. The ANL procurement system includes a Balanced Scorecard Self-Assessment Program which is comprised of 20 separate performance indicators that measure/gauge ANL procurement operations in the areas of customer satisfaction, internal business perspective, learning and growth, and financial perspective. ANL's FY-05 Procurement Balanced Scorecard (PBSC) Self-Assessment Report reflects that the Laboratory has met or exceeded performance expectations in 19 of its 20 performance indicators for FY 2005. ANL has met its socioeconomic goals (small business, small disadvantaged, woman-owned, HUBZone, veteran owned) for FY-05 with the exception of service-disabled veteran owned businesses. ANL has met its expectations for acquisition lead times, cost of purchasing operations, effective utilization of alternate procurement approaches, and employee satisfaction goals. ANL has also implemented all three of the "Opportunities for Improvement" initiatives identified in its FY-04 Procurement Balanced Scorecard Self-Assessment. ANL continues to participate in and measure its Procurement Operations and assess efficiencies/best practices occurring in similar contractor operations.

In summary, the ANL Procurement System is well run and effective in meeting its established goals.

The **Communications and Trust System Assessment Measure** has been assigned an "Outstanding" rating. The objective of the ANL Communications and Trust System is to provide coordinated and effective communications and outreach to the Laboratory stakeholders. An important part of this effort is to gain and maintain the trust of the local citizens who live near the Laboratory as well as that of the State of Illinois. This measure includes some specific objective milestones/deliverables as well as a subjective evaluation on the quality of the ANL communications effort. A new ANL Communications and Public Affairs Director was hired at mid-year. Communication between ANL and ASO/CH is open and productive. ANL is working closely with ASO/CH representatives to prepare a Communications Plan and perform a review of the overall ANL Public Affairs Program in FY-06. The ANL Public Affairs Department has been active in ensuring that a corporate message is tied to press releases and that media training is available for key ANL Managers. ANL has maintained a very constructive relationship with the surrounding communities through the Community Leaders Round Table and the relationship between ANL and the State of Illinois is judged to be one of the best in the DOE system. The State of Illinois continues to be financially supportive of new construction projects at ANL, such as the Center for Nanoscale Materials. ANL organized the Secretary's initiative titled "What's Next" and co-hosted the Office of Science initiative for a National Conference for Black Students, both in Chicago. ANL conducted a number of initiatives, such as the Washington media event for the ANL Director, and have taken an active role in the conduct of the public meetings on the Regional Biocontainment Laboratory.

- 10) For the **Technology Transfer System Assessment Measure**, ANL received an "Outstanding" rating. The objective of the Technology Transfer System is to contribute to the success of DOE's mission through partnerships which support both DOE and National policy objectives. These objectives include maintaining and enhancing the U.S. economic and scientific preeminence. Technology

Transfer includes Work-for-Others (WFO), Cooperative Research and Development Agreements (CRADAs) and licensing actions. There are five measures in the contract for Technology Transfer and they were all rated very highly. During FY-05, ANL received four R&D 100 Awards which no other DOE Laboratory has exceeded. They exhibited at seven conferences, showcasing ANL technologies. ANL made improvements in their licensing tracking database, hosted several industrial visits, and initiated several new CRADAs. ANL issued three licenses to start-up companies which significantly increased the opportunity for bringing ANL technology to the market place. Quarterly status meetings are conducted between ASO and ANL for improved communication flow. ANL has also performed some Technology Transfer Benchmarking, where ANL compares very favorably in various technology transfer statistics (licenses, royalty income, patent filing small business start ups, etc.) with other DOE labs and universities.

UofC/ANL End-of-Year Self-assessment:

Table B is an ASO assessment of the quality of the ANL end-of-year self-assessment. The Table is organized by performance area and includes a list of additional topics that ASO believes should be considered opportunities for improvement during FY-06.

Table A
Summary ANL Ratings for FY 2005

Section I Science and Technology

Performance Area	ANL Self-Rating	ASO Rating
Science and Technology	Outstanding. This includes periodic review reports provided by the University of Chicago.	Outstanding

Section II Mission Critical Operations

Appendix B Section/Performance Area Title	ANL Self-Rating	ASO Rating
1.1 Infrastructure (ANL-W)	Outstanding	Outstanding
1.2 Contractor Management	Outstanding	Outstanding
1.3a Integrated Safety Management	Excellent	Good
1.3b Infrastructure (ANL-E)	Outstanding	Outstanding

Section III General Operations

Appendix B Section/Performance Area Title	ANL Self-Rating	ASO Rating
II.1 Business Management		
II.1a Counterintelligence	Outstanding	Outstanding
II.1b Cyber Security	Outstanding	Outstanding
II.1c Diversity	Outstanding	Outstanding
II.1d Financial Management	Outstanding	Outstanding
II.1e Human Resources	Outstanding	Outstanding
II.1f Information Management	Outstanding	Outstanding
II.1g Safeguards and Security	Outstanding	Excellent
II.1h Legal Management	Outstanding	Outstanding
II.1i Personal Property	Outstanding	Outstanding
II.1j Procurement	Outstanding	Outstanding
II.2 Stakeholder Relations		
II.2a Communications and Trust	Outstanding	Outstanding
II.2b Technology Transfer	Outstanding	Outstanding

Table B
Quality of the FY-05 End-of-year Self-Assessment and
ASO Comments

Section I Science and Technology

#	Performance Area	Adequacy of the Self-Assessment	Comments and Focus on FY-06 Improvements
1	Science and Technology	University of Chicago peer review process is accepted by DOE-HQ as adequate.	None

Section II Mission Critical

#	Performance Area	Adequacy of the Self-Assessment	Comments and Focus on FY-06 Improvements
1	Infrastructure (ANL-W)	Yes	None
2	Contractor Management	Yes	None
3	Integrated Safety Management	Did not adequately address the results of external reviews performed by DOE.	Self-assessment needs to address the overall plan to identify effective corrective actions (policies, procedures, staffing, organizational (if needed) and operational changes) for ES&H Program, particularly Radiation Safety Program, PAAA, nuclear facility operations, TRC and DART Rates.
4	Infrastructure (ANL-E)	Yes	None

Section III General Operations

#	Performance Area	Adequacy of the Self-Assessment	Comments and Focus on FY-06 Improvements
	Business Management		
1	Counterintelligence	Yes	None
2	Cyber Security	Yes	For FY-06, ANL will need to continue efforts on certifying computer enclaves and maintaining those certifications.
3	Diversity	Yes	For FY-06, ANL will need to assess diversity program goals and strategies for achieving them.
4	Financial Management	Yes	None
5	Human Resources	Yes	None
6	Information Management	Yes	None
7	Integrated Safeguards and	Did not adequately address Materials	Materials and Control Accountability Program changes are needed to resolve review findings

#	Performance Area	Adequacy of the Self-Assessment	Comments and Focus on FY-06 Improvements
	Security	and Control Accountability Program	
8	Legal Management	Yes	None
9	Personal Property	Yes	None
10	Procurement	Yes	None
	Stakeholder Relations		
11	Communications and Trust	Yes	Focus needed in identifying and centrally coordinating Lab-wide public affairs communications.
12	Technology Transfer	Yes	None

Attachment A
Evaluation Process

Attachment A Evaluation Process

1.0 Background:

On May 24, 1995, the University of Chicago and the U.S. Department of Energy (DOE) established a new performance based contract for the management and operation of Argonne National Laboratory (ANL). Effective October 1, 1999, the performance-based Contract between the United States DOE and the University of Chicago was renewed for a second 5-year term. The contract includes the use of performance expectations agreed to each year in advance by DOE and the University of Chicago, as standards against which ANL's scientific/technical, managerial, and operational performance are evaluated. The University of Chicago's performance is evaluated and rated each year, at the end of the year, against the agreed-to performance expectations. While the selected performance expectations are considered critical for measuring ANL's success, they are not viewed as a comprehensive basis for evaluating ANL performance. Peer reviews, audits, appraisals, and other reviews conducted during the evaluation period are also considered.

An important part of the performance-based contract is the use of a contractor self-assessment. Each year, the University of Chicago is required to perform a formal, comprehensive self-assessment of their overall performance. This self-assessment examines the University of Chicago performance against each of the performance expectations and includes other factors that the University of Chicago believes are important to the success of the ANL mission. Finally, DOE conducts an evaluation of the University of Chicago's performance. This evaluation is based on the ASO review of the University of Chicago Self-Assessment, the University of Chicago's success in meeting the contractual performance expectations, as well as peer reviews, audits, appraisals, and other reviews conducted by DOE and others during the evaluation period. The ASO evaluation determines the fee to be awarded by DOE to the University of Chicago under the contract.

2.0 Process:

Each year, prior to the beginning of the fiscal year, ANL performance expectations are negotiated between the University of Chicago and ASO. The ANL contract is then modified each year to include the negotiated performance expectations. For FY-05, a total of sixteen functional areas were selected for measuring ANL performance. ANL performance is divided into two distinct categories. The first category, Performance Measures is fee-bearing. The second category, System Assessment Measures is not fee-bearing. The Performance Measures are sub-divided into Science and Technology and Mission Critical Operations. The second category, System Assessment Measures is also known as General Operations and is subdivided into Business Management and Stakeholder Relations. Weighting factors are also agreed to for each of the functional areas prior to the beginning of the fiscal year.

For the ASO evaluation of the ANL "Operations" performance, a three-step process is performed annually at the end of the evaluation period. These steps are:

- 1) The University of Chicago evaluates their own performance against agreed to expectations for the Performance Measures and System Assessment Measures.
- 2) The University of Chicago performs a self-assessment of their overall performance. This self-assessment is based on their performance against the Performance Measures and System Assessment Measures evaluated under step #1 above and other relevant factors that they believe directly affect performance.
- 3) ASO conducts an evaluation of the University of Chicago performance including an evaluation of the University of Chicago Self-Assessment. ASO validates the University of Chicago performance against the contractual expectations (Performance Measures and System Assessment Measures and identifies and considers other relevant factors that directly influence the evaluation of University of Chicago performance.

If there are disagreements between ASO and University of Chicago on individual ratings, then ASO meets with the University of Chicago/ANL staff to determine if additional information is available that should be considered in the final evaluation and rating. Several sessions were conducted at mid-year based on the ASO mid-year evaluation and the end of the FY-05 evaluation period.

For the DOE-HQ evaluation of the ANL "Science and Technology" performance, a four-step process is performed annually. The ANL-E and ANL-W Science and Technology Programs are evaluated separately. These steps are conducted at the end of each evaluation period:

- 1) ASO requests and receives appraisals from the DOE-HQ Program Organizations that fund significant Science and Technology work at ANL.
- 2) ASO develops a single rating for the ANL-E Science and Technology Program based on the evaluations that were received from the DOE-HQ Program Offices. A final rating for the ANL-E Science and Technology Program is developed by weighting each DOE-HQ Program rating by the level of funding provided by that Program Office.
- 3) A separate rating is developed for ANL-W based on the sponsor's evaluation of the Science and Technology work performed at ANL-W. A final rating for the ANL-W Science and Technology Program is developed by weighting each DOE-HQ Program rating by the level of funding provided by that Program Office.
- 4) ASO prepares an attachment to this Report that summarizes the ANL-E and ANL-W Science and Technology performance rating.

3.0 Data Sources for ASO Evaluation:

The University of Chicago Self-Assessment and the individual ratings of ANL performance against the Performance Measures and System Assessment Measures are key data to the ASO evaluation. Validation of the performance measures data is also performed by ASO. For the performance evaluations in the areas of operations, input comes from the ASO staff, CH functional divisions and offices that support ASO in oversight of particular laboratory functions, as well as from HQ functional units.

ASO has primary responsibility for evaluating the University of Chicago performance under the Mission Critical Operations and General Operations categories, with the exception of Science and Technology. The DOE-HQ Program Offices have primary responsibility for evaluating the University of Chicago performance under the Science and Technology category. Table 1 and Table 2 of the ASO Annual Evaluation Report list all of the functional areas and the adjectival ratings assigned by both ASO and University of Chicago for FY-05. ASO has responsibility for preparing the Annual Evaluation Report and determining the total fee to be awarded based on the individual ratings.

Input to the Science and Technology summary appraisal was solicited from sources having a significant interface with the University of Chicago and ANL. Input from DOE-HQ Program Offices has been solicited by ASO for providing feedback and rating ANL programs. Where possible, consolidated input for a single program was requested at the DOE Assistant Secretarial level. The University of Chicago also conducts peer reviews for Science and Technology and this information is made available to DOE-HQ.

4.0 Rating System

For FY-05, adjectival ratings were:

Outstanding	Significantly exceeds the standard of performance; achieves noteworthy results.
Excellent	Exceeds the standard of performance. Although there may be room for improvement in some elements, better performance in all other elements more than offset this.
Good	Meets the standard of performance. Deficiencies do not substantively affect performance.
Marginal	Below the standard of performance; deficiencies are serious and may affect overall results; management attention and corrective action are required.
Unsatisfactory	Significantly below the standard of performance; deficiencies are serious, may affect overall results, and urgently require senior management attention.

The Standard of Performance is that which is reasonably expected of Management and Operating Contractors on the basis of applicable orders and regulations and on observations of the performance of comparable R&D organizations. It includes, for example, making effective use of sound management judgment, administrative, and business practices within existing funding constraints.

Attachment B


DOE-HQ Program Office Evaluations



Department of Energy
Office of Science
Washington, DC 20585

December 2, 2005

MEMORANDUM FOR **ROBERT WUNDERLICH**
 MANAGER
 ARGONNE SITE OFFICE

FROM: **JAMES F. DECKER** 
 PRINCIPAL DEPUTY DIRECTOR
 DEPUTY FOR PROGRAMS

SUBJECT: **FY 2005 Office of Science Program Performance**
 Evaluation

For FY 2005 the Argonne National Laboratory's (ANL) overall performance on Office of Science (SC) science and technology programs is rated as Outstanding. This rating relates to a scale that includes Unsatisfactory, Marginal, Good, Excellent, and Outstanding. It is a weighted average of performance evaluations provided by the SC offices of Advanced Scientific Computing Research (ASCR), Biological and Environmental Research (BER), Basic Energy Sciences (BES), Fusion Energy Sciences (FES), High Energy Physics (HEP), Nuclear Physics (NP), and Workforce Development for Teachers and Scientists (WDTS). The weighting factor is the fraction of SC's ANL budget provided by each of the above program offices. The attached table provides the individual SC program ratings of the laboratory's performance for each of the performance measures and the overall SC weighted scores. Full narrative evaluations from each program area will be emailed separately.

I would like to take this opportunity to thank you and your staff for your work in the development of the FY 2006 Performance Evaluation and Measurement Plans which incorporate the new SC Laboratory Appraisal Process. Approval of these plans marks the implementation of a strengthened contractor performance-based management system within SC. This new system allows for increased comparability, consistency, fairness, and transparency in the performance evaluation of our laboratories and I look forward to working with you as we implement our new process.

Attachment

**Office of Science
Argonne National Laboratory
FY 2005 Ratings for each Performance Measure**

	Performance Measure 1: Quality of S&T	Equivalent Grade	Performance Measure 2: Relevance	Equivalent Grade	Performance Measure 3: Research Facilities	Equivalent Grade	Performance Measure 4: R&D Management	Equivalent Grade	Overall Program Rating	Equivalent Grade	
ASCR	4.0	O	4.0	O	n/a	-	3.0	E	3.67	O	
BER	3.26	E	3.26	E	3.09	E	2.88	E	3.12	E	
BES	3.4	E	3.7	O	3.8	O	3.4	E	3.58	O	
FES	4.0	O	4.0	O	n/a	-	3.0	E	3.67	O	
HEP	3.7	O	3.4	E	3.8	O	3.2	E	3.53	O	
NP	3.6	O	3.5	O	3.5	O	3.45	E	3.51	O	
WDIS	3.4	E	3.3	E	n/a	-	3.4	E	3.37	E	
Overall SC Weighted Scores	3.5	O	3.6	O	3.5	O	3.3	E			3.5 = O

Ratings:
 O = Outstanding: 3.5 to 4.0
 E = Excellent: 2.5 to 3.4
 G = Good: 1.5 to 2.4
 M = Marginal: 1.0 to 1.4
 U = Unsatisfactory <1.0

Attachment C
Fee Calculations

**Attachment C
FY-05 Fee Calculation**

A. Science and Technology Part I – Argonne East (55% of the fee)

The Office of Science provided a consolidated rating of "Outstanding" for the Science and Technology work that they sponsored at ANL-E. ASO agrees with this rating.

B. Science and Technology Part II - Argonne West (10% of fee)

The Science and Technology Program at ANL-W is evaluated separately. For FY-05, the primary activity was to transfer ANL-W to the Idaho National Laboratory. ANL met all of the objectives for the ANL-W transfer and received recognition from the Office of Nuclear Energy, Science, and Technology, as well as from the Idaho Operations Office for this task. The rating for ANL is an "Outstanding".

C. Overall Summary Table for ANL Fee Associated with the Performance Measures

Functional Area	Weight	Adjectival Score	Numerical Rating	Percent Fee associated with Numerical Rating	Maximum fee for this area	Fee awarded
Science and Technology (ANL-E)	55%	Outstanding	3.5	97%	\$1,925,000	\$1,867,250
Science and Technology (ANL-W)	10%	Outstanding	3.8	100%	\$ 350,000	\$ 350,000
Contractor Management	5%	Outstanding	3.8	100%	\$ 175,000	\$ 175,000
Integrated Safety Management	20%	Good	2.0	60%	\$ 700,000	\$ 420,000
Infrastructure	10%	Outstanding	3.7	99%	\$ 350,000	\$ 346,500
Total	100%				\$3,500,000	\$3,158,750

Note: The University of Chicago would receive 90% of the available fee.

D. System Assessment Measure Rating (non-fee bearing)

Number	Functional Area	Rating	Weight	Score
Business Management				
3.a	Counterintelligence	4	0.06	0.24
3.b	Cyber Security	4	0.08	0.32
3.c	Diversity	4	0.1	0.4
3.d	Financial Management	4	0.1	0.4
3.e	Human Resources	4	0.1	0.4
3.f	Information Management	4	0.04	0.16
3.g	Integrated Safeguards and Security	3	0.1	0.3
3.h	Legal Management	4	0.06	0.24

3.j	Personal Property	4	0.1	0.4
3.k	Procurement	4	0.1	0.4
Stakeholder Relations				
4.a	Communications and Trust	4	0.08	0.32
4.b	Technology Transfer	4	0.08	0.32
Total		47 out of 48	1.0	3.9

Final Score Is: 3.9

The final rating for the System Assessment Measures (General Operations) is: 3.9 for an "Outstanding" rating. Where:

Outstanding = 4
 Excellent = 3
 Good = 2
 Marginal = 1
 Unsatisfactory = 0